NMR Facility
Chapman University School of Pharmacy
Harry and Diane Rinker Health Science Campus
9501 Jeronimo Rd., Irvine, CA 92618

Welcome to the NMR Research Core Facility of School of Pharmacy at the Chapman University. We offer a variety of services to researchers from the Chapman University and for external users.

We can provide training and advise researchers how to use NMR spectrometer efficiently. We also can run experiments requested by users.

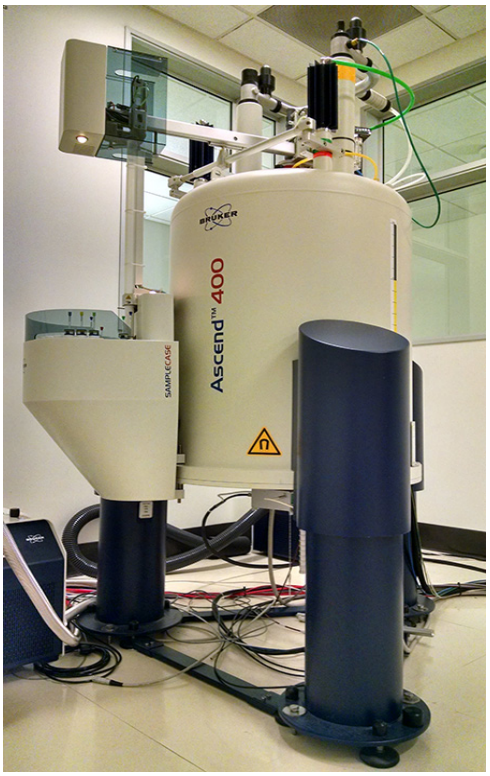
Fee:

Chapman University researchers and invesgtigators have reduced base rates as specified below.

For outside users, current base rates are $20/proton and $50/carbon experiment (tube and solvent included, please see details here.

Our facility is equipped with 400 MHz Bruker NMR spectrometer.

- 5 mm broadband observe (BBO) probe:
  - ^{1}H (outer coil); ^{15}N-^{31}P and ^{19}F (inner coil).
- Prodigy broadband observe CryoProbe™:
  - ^{1}H/^{19}F (outer coil); ^{15}N-^{31}P (inner coil).
- Z-axis pulsed field gradient capability.
- Autosampler for automated analysis of up to 24 samples.



General rules and requirements:

- Chapman researchers can use the spectrometer for their own educational or research projects without the charge.
- Students, assistants, and postdocs, who would like to use the spectrometer, should provide written request from their PI (Chapman University faculty).
- All users should demonstrate sufficient proficiency in operating the spectrometer. User training is available upon request.
- All users can analyze their samples with the room-temperature BBO (broadband observe) or Prodigy CryoProbe™. Please contact Dr. Maslennikov in advance if you need to use the CryoProbe.
- **Please do not bring any radioactive samples – we will not allow to analyze them in any circumstances.**
- If you would like to ask us to measure your samples the flat rates (including tubes and solvents) for internal users are $8/sample for 1D proton and $20/sample for 1D carbon experiments. Please see this page for other rates.
- All self-service users should provide their own tubes, caps, and NMR-compatible solvents. We recommend Norell 508-UP-7 / Wilmad SP528 or better tubes for quantitative analysis and Norell SVCP-5-178 or better tubes for HTP experiments.
- Other rules for sample preparation:
  - Use PTFE caps for volatile solvents.
  - Do not use broken tubes and/or damaged caps.
  - Solvent/sample length in the NMR tube: minimum 4 cm, maximum 5 cm.
  - If your tube broke accidently in the magnet, let us know immediately and do not try to recover the tube – the probe can be damaged.
- If you want to use special tubes, please let us know in advance.
- We can provide you with appropriate HTP NMR tubes and caps if you return them clean and undamaged.
- The facility can provide necessary equipment for sample preparation (pipette samplers, tips, hand centrifuge for NMR tubes) and temporary storage (+4C, -20C).
- If you need any additional equipment to handle your samples, please bring it with you or let us know in advance.

Acknowledgement of Facility

In case you used the data collected in our Facility for publication, please add an acknowledgement for the facility assistance. Thank you.

Current Rates for NMR Spectroscopy Services.

Internal and External users (rates per sample):

			Chapman University	Academia and not-for-profit	For-profit organizations	Remarks
Standard 1D-NMR	^{1}H		$5	$10	$20	
	^{13}C	≥4mg	$15	$25	$50	MW <2,000 Da, ^{1}H 1D-spectrum included
		<4mg	$35	$70	$150	
	^{19}F		$15	$25	$50	
	^{31}P		$15	$25	$50	
	Other		$20/hour	$40/hour	$80/hour	Please contact us
Homo & Hetero 2D-NMR			$20/hour	$40/hour	$80/hour	Maximum charge 3h/sample
Diffusion ^{1}H			$20	$40	$80	
Other NMR experiments			Please contact us			
Spectra Interpretation			$100/hour			Please contact us

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Analytical Core Facility
Chapman University School of Pharmacy (CUSP)
Harry and Diane Rinker Health Science Campus
9501 Jeronimo Rd., Irvine, CA 92618

The CUSP Analytical Core Facility, established in 2015, is located at Chapman University School of Pharmacy, the first School of Pharmacy in Orange County, California. The facility is equipped with both basic and advanced analytical instrumentations required in biomedical, pharmaceutical, and biotechnological research. The facility provides research and training support to researchers from Chapman University and other academic/non-profit institutions and private companies.

Equipment Training

All first-time users of equipment must obtain training from the Core Facility staff on how to properly operate the equipment. The mandatory instrument operator training is provided at no cost. After completing the training users of the facility have independent access to all technologies located in the facility. Full operator assisted analysis service is available upon additional fee-for-service basis.

Consumable Supplies

The Core Facility provides training, access to the equipment, and any needed assistance. It does not provide consumable supplies, such as solvents, other chemicals, reagents, standards, culture flasks, media, filters, chromatographic columns, pipettes, tips, tissue paper, etc., which are the responsibility of the users. If used, it will be billed in addition to the instrument usage rate.

General rules and requirements

General rules and requirement to access the Core Facility services is available on the website: https://www.chapman.edu/pharmacy/research/core-facilities.aspx

Request for Access

All first-time users are required to complete the online registration form approved by the principal investigator and sent by e-mail to the Core Facility Coordinator. Unregistered usage of the Facility is prohibited. The Facility is open during normal business hours (8:30 am to 5:30 pm). After-hour access can be granted when specifically requested and approved by the Facility Coordinator. Summer Undergraduate Research Fellows will generally not have after-hour access without supervision by a trained individual from the same laboratory.

Acknowledgement of Facility

All Core Facility users are required to acknowledge specific services in their scientific meeting abstracts and publications: *The research was made possible by the use of the CUSP Research Core Facility, supported by the Office of Associate Dean of Research, Graduate Studies and Global Affairs*

Contacts:

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Website: https://www.chapman.edu/pharmacy/research/core-facilities.aspx

Equipment Fees

- All Chapman University researchers and Investigators have reduced rates.
- One time submission or use: create a Purchase Order
- Multiple submission or use: create a blanket order
- Minimum unit rate per hour or per sample will be applied

Invoice will be provided for all facility usage on monthly basis

Instrument	**Chapman****	**Academia/ non-profit****	**For profit/ Corporate****
Bruker LC/MS	$25/hr	$100/hr	$200/hr
Bruker MALDI-TOF MS	$25/hr	$100/hr	$200/hr
Shimadzu LC/MS	$25/hr	$100/hr	$200/hr
Shimadzu Protein sequencer*	$400/sample	$400/Sample	$500/Sample
Shimadzu UV/VIS Spectrometer	$5/hr	$20/hr	$40/hr
PCR/ RT-PCR	$5/hr	$25/hr	$50/hr
Analytical HPLC/UPLC	$15/hr	$50/hr	$200/hr
Preparative HPLC	$25/hr	$100/hr	$200/hr
Bio-Rad FPLC	$25/hr	$100/sample	$200/sample
Bio-Rad Imager	$5/hr	$25/gel	$50/gel
BD FACS	$25/hr	$100/hr	$200/hr
Bio-Rad PCR and RT-PCR	$15/hr	$50/hr	$100hr
Multi-mode Plate reader	$10/hr	$25/hr	$50/hr
Bruker FTIR Spectrometer	$10/hr	$25/hr	$100/hr
Centrifugation (High Speed / Ultra)	$15/hr	$50/hr	$100/hr
Cell Culture Facility (Hood)	$25/hr	$100/hr	$200/hr
Cell Culture (Incubator)	$5/day	$25/day	$100/day
Microscope Facility	$15/hr	$50/hr	$100/hr

* Operator assisted service only. Minimum sequence of 10 amino acid residues. Additional sequence billed at $40/residues.

** Rates do not include additional operator-assisted service at $65/hr.